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THE DEVELOPMENT AND IMPLEMENTATION OF COCKPIT RESOURCE MANAGEMENT IN UAL RECURRENT TRAINING

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LOFT for United Airlines started in 1976. At that time it was basically no more than a line-simulated training function conducted in a full-mission simulator with no attention or stress on its human factor content.

Very soon after the implementation of the LOFT program our Flight Standards Instructors began to voice concerns about certain crew behavioral situations they were observing in the flight crew's execution of cockpit duties. These duties involved emergency procedures as well as irregular and normal procedures and situations. It was evident that new information was surfacing concerning crew interaction, or its lack thereof, in the cockpit and its effect on satisfactory performance. These observations naturally raised the question of how this information translated into the safety of aircraft operations.

Interestingly, while discussing this new program soon after LOFT training was implemented at United, Capt. Gus Sommermeyer (retired Sr. Vice-President of Flight Operations) made the following comment: "You know Dave, in 1955 we recognized we had a problem in our cockpits--but we could not identify it." We now believe we have identified the problem. The identification process came with the start of LOFT training.

Very soon thereafter, Capt. Ed Carroll, then Vice-President--Flight Standards and Training, directed a serious study of the problem which had surfaced. A short time after this effort was started the unfortunate Portland DC-8 accident occurred. That accident, which had multiple human factor implications, was the catalyst which provided even more impetus to our effort to develop training that would lead to a learning experience in Cockpit Resource Management.

The basics of the program and its rationale have been shared with you previously by Ed Carroll.

At this point I think it is important to emphasize that all of the academic learning that may be accomplished or presented in any operation does not mean anything until a vehicle or training system is in place which can bring the complete process to fruition. Let me repeat--without such a vehicle to permit a flight crew to use the tools learned, it only garbages up the mind.

At the time the CRM development process was taking place at UAL, the development team was asked to prepare the program so that a request could be made to the FAA to conduct Proficiency Flight Checks only once a year. After extensive work and a great deal of program testing, this was accomplished.

Several items had to be part of the process for FAA approval. The system had to be

repetitive, the crew interactive, and the training had to be conducted under the crew concept. The foundation had to include two additional cornerstones: 1) it was necessary to have adequate human factor content, and 2) an advanced state-of-the-art simulator and appropriate electronic devices were required. In the latter case, videotaping of the flight crews during the LOFT exercise was introduced. In the initial phase of program development, it was the impression of the development team that this concept of the program would not be readily accepted by the flight crews. This was an erroneous assumption and, quite to the contrary, videotaping of their performance was well-received by our flight crew members. The use of videotape to permit an in-depth critique of crew performance regarding human factor implications has proven to be a very effective and well-received tool. The use of the videotape is a private affair. After the critique process, conducted by a well-trained instructor, the tape is erased. Much of the success of the CRM program at UAL is, without question, a result of a joint effort between ALPA and the company. There was in-depth participation by both parties.

Several requirements involving the LOFT process have emerged during the period we have been using LOFT. All are important.

First, all scenarios need to be tightly scripted. The objectives and content need to be well-defined to produce the desired learning atmosphere and results. Secondly, the content must be rigidly controlled to enhance the learning experience. These requirements permit a composite approach to the program and permits its conduct with the desired standardization. The third requirement is the formulation of a plan for updating and the continuing progress of the system. For example, the initial United 5-year plan was:

1st year: Style identification

2nd year: Communications

3rd year: Decision-making

4th year: Critique

5th year: Judgement

I will not elaborate on them at this time, but will be able to do so should anyone wish to discuss them further during the workshop.

Early in the development of the 5-year plan company hierarchy questioned the wisdom of dealing with style identification the first year. Their point was that communication is the most important area of concern. The rebuttal of the development team, and it has proven valid, was that if you understand how people are coming across to you and the style in which they do it, you can have more effective communication. It is, we believe, one of the very basic elements of the synergistic process necessary for the safe operation of aircraft. Important also is to realize how this same synergistic process, which is necessary for the safe operation of aircraft, can be effective in a multitude of situations that require maximum team effort.

The importance of instructor participation in CRM must not be overlooked. It is necessary to emphasize the very critical part the well-trained instructor plays in the CRM program. His orchestration of the entire training exercise and his employment of very perceptive observational skills are the keys to making an enriching and productive learning experience for the flight crew. He must be schooled in the seminar and pre-work process, have good equipment qualifications, understand the instructor manual, be highly trained as a LOFT administrator, have substantial training in observational skills and be able to conduct the all-important critique process.

The final point I believe that should be made at this symposium is that no matter what you are doing or are proposing to do in the area of human factors in your operations--do something. Do it soon and move with it. In time you will get what you desire and are looking for--increased safety. I have a warm and confident feeling about the recognition of CRM and its need in our industry today. It is, I think, one of the most significant things that have appeared in aviation since the advent of the jet-powered transport aircraft.

UAL Recurrent Training Outline

Day-One:

A) CRM exercise
B) Systems and operational review
C) Evacuation training (refresher)
D) Rules of LOFT

Day-Two:

A) Pre-flight for S/O or crew for 2-man aircraft.
B) Flight planning
C) LOFT (one or two segments)
D) Proficiency check maneuvers practice
E) Critique (video tape)

Day-Three--Proficiency Check:

A) Oral
B) Simulator check
C) Special training (wind shear, required items, etc.)
D) Operational review